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ABSTRACT

This study of 528 Tennessee welfare recipients enrolled in regular community college vocational or technical programs examined academic background, personal characteristics, student attitudes, college experiences, and learning outcomes. These students were primarily single parents who received Aid to Families with Dependent Children benefits and were voluntarily attending the community college. The Community College Student Experiences Questionnaire was used to obtain: demographic information, measures of student involvement, satisfaction with the community college experience, involvement with clubs and organizations, and participation in learning and study skills instruction. Multiple regression analyses were undertaken to determine predictors of grade point average (GPA), students' self-assessments of gains in career preparation, and self-assessed growth in personal and social development. Student involvement in coūrse activities and clubs were significant predictors of students' self-assessments of progress in personal and social development. For gains in career preparation, involvement in clubs and vocational courses were significant predictors. Satisfaction with the college environment as well as instruction in learning and study skills were significant predictors of both self-assessed career preparation and personal development. (Contains 32 references and 3 tables.) (SW)

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Does JOBSWORK Work?

Assessing the Effect of Student Involvement on Outcomes

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Jean Endo
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Abstract

The reliability of student quality of effort in predicting three outcomes of the community college experience was examined for a sample of welfare recipients enrolled in regular community college vocational or technical programs. Demographic variables, measures of student involvement, satisfaction with the community college experience, activities with clubs and organizations, and instruction in learning and study skills served as the independent variables. All independent variables were responses extracted from the Community College Student Experiences Questionnaire. The criterion variables were grade point average (GPA), students' self-assessments of gains in career preparation, and self-assessed growth in personal and social development. Parallel standard multiple regression analyses were completed for the three criterion variables using the same predictors.

In each analysis sets of significant predictors were found to explain the outcome variables with R^2 ranging from .35 for GPA to .45 for personal and social development. Student involvement in course activities and clubs were significant predictors of students' self-assessments of progress personal and social development. For career preparation, involvement in clubs and vocational courses were significant predictors. Satisfaction with the college environment as well as instruction in learning and study skills were significant predictors of both career preparation and personal development.

Does JOBSWORK Work?

Assessing the Effect of Student Involvement on Outcomes

Introduction and Perspectives

Community colleges serve a diverse clientele in terms of age, ethnicity, and family responsibilities. Kinnick and Kempner (1988) noted that community college students, compared to their counterparts in four-year institutions, come from lower socioeconomic backgrounds, participate in fewer college preparatory classes in high school, and exhibit lower aspirations for the baccalaureate. All of these characteristics have been associated with lower levels of attainment both academically and economically. In Tennessee, one subgroup of the population of community college students is involved in a program designed to assist welfare recipients in moving from welfare dependency to employment. This program, JOBSWORK, targeted 7% of the welfare recipients, beginning in 1991, and supported individuals in their attendance at community colleges. With diverse student backgrounds, goals and objectives, evaluation of programs such as Tennessee's JOBSWORK are multifaceted. In addition to grade point averages which tap only a narrow band of the learning spectrum, literature on community college evaluation suggests examining indicators such as assessment of student's goals and satisfaction with their studies (Community College Roundtable, 1994; Cousineau & Landon, 1989).

Purpose

One approach to examining JOBSWORK is to explore students' own assessments of their effort as part of the "missing link"

connecting outcomes to the process of education. Specifically, this project has three purposes. First, we attempted to explain grade point averages for JOBSWORK participants enrolled in vocational courses of study in terms of student involvement, institutional environment, and background characteristics. Second, students' own assessments of their gains in personal and social development, an outcome from the affective domain, were examined in relation to the same set of predictors. Finally, in light of the purpose of JOBSWORK, to move clients into the world of work, we attempted to explain self-assessed gains in career preparation in terms of the same predictors.

Literature Review

JOBSWORK

Utilizing education to provide the opportunity to enable long-term welfare recipients to become productive, self-sustaining employees became a federal initiative in the Job Opportunities and Basic Skill Training Program (JOBS) through the Family Support Act of 1988. JOBS includes post-secondary education as an option for parents who receive Aid to Families with Dependent Children and is particularly important to women because nearly 95% of welfare recipients are single mothers (Goodwin, 1989).

Not all states have elected to provide college education and related support services to AFDC recipients. Tennessee's JOBSWORK program, however, provides post-secondary educational options through the state's vocational schools and community colleges with financial assistance for tuition, books,

transportation, child care, and medical services. Administration of JOBSWORK is coordinated with efforts and programs of the Tennessee Department of Labor, Job Partnership Training Act, which is part of an initiative to blend social and support services with job training. Long-term welfare dependents have been given first option to take advantage of JOBS on a voluntary basis (Hagen & Lurie, 1992).

Outcomes

While grade point averages have long been the benchmark for gauging the success of schooling, the addition of assessments of student satisfaction with their college experiences, goal attainment, personal growth, and career preparation have enlarged the lens for viewing the total college experience. In addition to these outcomes, researchers in the field of higher education have, for the past two decades, examined the effects of student involvement on the learning process. For example, Astin (1984) posited that the amount of learning and personal development a student experiences is directly proportional to both quality and quantity of student involvement in the college experience. Likewise, Pace (1984) held college "students accountable for the amount, scope, and quality of effort they invest in their own learning and development, and specifically in using the facilities and opportunities that are available in the college setting" (p. 6). Finally, Kuh and his colleagues (1991) noted that the impact of the college experience on students increases when they are actively engaged in various aspects of college life.

Astin's (1984) student involvement theory and Pace's (1984) concepts of quality and quantity of student effort both place students as active participants in their own growth. Pace (1983) operationalized his quality and quantity of student effort constructs in the College Student Experiences Questionnaire (CSEQ), an instrument designed to measure, among other things, the depth and breadth of students' involvement in their use of the facilities and opportunities afforded by their institutions. Later, Pace and his colleagues extended the notion of student involvement to community college students with the development of the Community College Student Experiences Questionnaire (Friedlander, Pace & Lehman, 1990). This instrument is adapted to the diversity of student characteristics, aims, experiences, and outcomes particular to the community college. After analyzing responses from students from 24 community colleges, Lehman (1992) demonstrated the applicability of the quality of effort concept to community college students.

Academic achievement. A variety of predictors have been employed to explain academic achievement. For example, holding precollege, institutional, and collegiate experiences constant, academic achievement measured in terms of grades is dependent not only upon ability but also upon desirable personal characteristics: positive attitude and motivation, as well as adequately developed study and organizational skills (Astin, 1971, 1975; Ethington & Smart, 1986; Stoecker, Pascarella & Wolfle, 1988; Thompson, 1976). Johnson (1994) extended this line of inquiry and found academic background, age, and satisfaction

with previous courses to be significant predictors of academic success.

Institutional interventions can also make a difference in college grade point averages. Kulik, Kulik and Shwalb (1983) found that institutional intervention for underprepared students can make a positive difference in grade point averages by .27 of a standard deviation if the students are involved in academic and counseling support programs during the freshman year. Further research supports the idea that involvement in the academic support that institutions provided for students is related to academic success. For example, Lipsky and Ender (1990) discovered a positive correlation between GPA and a study skills course, and Walsh (1985) found a positive correlation between GPA and a program in student development.

Personal and social development. After synthesizing two decades of research, Pascarella and Terenzini (1991) concluded that small but statistically significant changes occur in psycho-social areas of students' development as a result of higher education, specifically contacts with faculty and other agents of socialization. Kaufman and Creamer (1991) developed a causal model to explain the influences of student pre-enrollment characteristics on freshman year involvement and growth. They found that the quality of effort expended in relations with peers had a significant impact on personal and social gains, but quality of effort in academic areas did not.

Career preparation. Pascarella and Terenzini (1991) concluded that initial attendance at a two-year rather than a

four-year institution has only a small effect on occupational status. Further, Smart and Ethington (1985) found no significant effect of initially attending a two-year college on several measures of jobs stability and satisfaction when the baccalaureate was eventually earned.

In addition to academic background and personal characteristics, satisfaction with course work and development of study skills have proven to be significant predictors of academic success, while quality of involvement in the college experience affects personal growth. Using these results of previous research and guided by the notion that "the more effort students put into their college experiences, the more likely they are to make personal and academic gains" (Lehman, 1992, p. 19), we attempted to ascertain the importance of students' involvement in their community college experiences in predicting outcomes for Tennessee's JOBSWORK population.

Methodology

Data Sources

In the Spring of 1993 the Community College Student Experiences Questionnaire (CCSEQ) was administered by Jobs Training and Partnership Act counselors to Tennessee's JOBSWORK population. A total of 528 students in community colleges across the state completed the instrument as a component of the evaluation of the JOBSWORK program. JOBSWORK participants are single parents, primarily, who are receiving Aid to Families with Dependent Children benefits. Enrollment in the two-year college option is voluntary and designed to move long-term recipients

from welfare to work after two years. Since this project focuses on preparing participants for employability, JOBSWORK clients studying for associate degrees or certificates in vocational or technical programs were included in the evaluation. Rationale for restricting the analysis to JOBSWORK participants enrolled in vocational or technical studies is provided by Lehman (1991) who analyzed CCSEQ data separately for students enrolled in vocational programs.

Description of Instrumentation

The Community College Experiences Questionnaire surveys information from students in four areas: amount, breadth, and quality of effort in both in-class and out-of-class experiences; progress toward important educational outcomes; satisfaction with the community college environment; and demographic and background characteristics.

Nine Quality of Effort (QE) scales operationalize the construct of students' use of the programs and facilities provided by their institutions. Each Quality of Effort Scale consists of a list of related activities requiring incrementally greater effort as the list progresses. Respondents estimate the number of times during the current school year they have participated in a particular activity according to the following scale: 1 = never, 2 = occasionally, 3 = often, 4 = very often. Responses to individual questions are summed to create the QE score for a particular scale.

For all 23 items in the Estimate of Gains section, respondents rank the extent to which they believe they have made

progress during their experiences in this college according to the following criteria: 1 = very little, 2 = some, 3 = quite a bit, and 4 = very much. Lehman (1991) used factor analysis of Estimate of Gains responses from more than 7500 administrations of the CCSEQ to conclude that the 23 items can be categorized into six factors.

Variables

Responses to seven CCSEQ items requesting demographic and background information were included as predictor variables: age, ethnicity, time spent working at a job while in school, hours per week spent preparing for classes, effect of family responsibilities on school work, number of credits attempted in the spring 1993 term, and previous grades. Table 1 reports the variable names and coding for these variables.

The nine QE scales utilized as predictors in these analyses include: Course Activities; Library Activities; Experiences with Faculty; Student Acquaintances; Art, Music, and Theater; Writing Activities; Science Activities; Counseling and Career Planning Activities; and Vocational Skills. Refer to Table 1 for variable names and ranges.

Three additional predictor variables assessed student satisfaction with the college environment, learning and study skills instruction, and activities with clubs and organizations. Five items in the CCSEQ request students to rate how supportive, helpful and stimulating they find the instructors, courses, support staff, other students, and the college as a whole. Responses are summed to create the Satisfaction Scale, and higher

scores reflect greater degrees of satisfaction with the campus environment. Respondents are also requested to rate the amount of instruction they have received at the college in nine learning and study skills areas according to the responses: 1 = none, 2 = some, and 3 = a lot. The sum of these nine scores represent the study skills variable. Finally, student involvement with clubs and organizations is represented by the sum of responses to three activities coded 1 = never, 2 = occasionally, 3 = often, or 4 = very often. Table 1 presents variable names and ranges for these independent variables.

Three criterion variables were included: grade point average, students' self-assessments of their gains in career preparation, and their assessments of growth in personal and social development. Spring 1993 grade point averages for 345 JOBSWORK participants were collected from individual institutions and provided by the Tennessee Board of Regents. Gain in Career Preparation is represented by the sum of scores on four Estimates of Gains items of the CCSEQ. These four items assessed the extent to which the students believe they have made progress in: acquiring knowledge and skills applicable to a specific type of work, gaining information about career opportunities, developing career goals, and becoming acquainted with different fields of knowledge. Gain in Personal and Social Development was assessed using the total scores from another six of the Estimate of Gains items. These six items tapped students' progress in becoming aware of different cultures, philosophies, and ways of life; developing the ability to get along with different kinds of

people; clarifying their own values and ethical standards; understanding their own abilities and interests; developing an ability to learn independently; and cultivating good health habits.

Analyses

Three parallel analyses were conducted to examine the ability of the independent variables to predict GPA, gains in career preparation, and gains in personal and social development for the sample of Tennessee JOBSWORK participants. Each analysis was completed using standard multiple regression techniques. Standard regression reveals the size of the overall relationship among the independent and dependent variables and indicates how much of the relationship is contributed uniquely by each independent variable (Tabachnick & Fidell, 1989). A preliminary analysis revealed the interaction of race with other predictors in the GPA run; therefore, GPA was analyzed separately for African-American and White JOBSWORK participants.

Results

Description of JOBSWORK Participants

Nearly half (43.6%) of the JOBSWORK participants indicated their age ranged between 28 and 39 years of age. Another 25.8% are 23 to 27 years old, and 17.8% indicated that they are younger than 22. Race was about evenly divided between black and white, and the participants are predominantly (90.3%) women. Fifty-four per cent of the JOBSWORK participants surveyed reported that family responsibilities take some time from their school activities, and another 22.3% reported these responsibilities

take a lot of time away from school. More than half the students (64.7%) were taking 12 or more credits at the time of the survey.

GPA as the Criterion

Evaluation of the assumptions caused no concern for violation. Using $p < .001$ as the criterion for Mahalanobis distance, four multivariate outliers among the cases were identified and deleted. After deleting cases with missing data, 171 cases remained for analysis.

For the 84 African-American students, standard multiple regression produced a regression equation to explain 35.4% of the variance in GPA, $F(18, 65) = 1.98$, $p = .0237$. Only students' reports of previous grades contributed significantly to prediction of grade point average ($sr^2 = .10$). The predictor variables in combination jointly contributed another .25 in shared variability. For the 87 white students, the standard regression did not produce significant predictors, $F(18, 68) = 1.54$, $p = .1049$. Table 2 presents standardized regression weights and correlations with the dependent variable for each analysis.

Personal and Social Development as the Criterion

Evaluation of assumptions for this analysis revealed no cause for concern; one multivariate outlier was deleted. After removing from consideration those cases having missing values on any variables under consideration, the total number of cases remaining was 244. Using all the independent variables to predict self-reports of progress in personal and social development, R^2 (.45) was significantly different from zero $F(19,$

224) = 9.57, $p < .001$. Four predictor variables contributed significantly to R^2: skills instruction ($sr^2 = .045$), satisfaction with the community college experience ($sr^2 = .027$), activities with clubs and organizations ($sr^2 = .025$), and quality of effort in course experiences ($sr^2 = .024$). The 19 independent variables contributed .33 jointly to the 44.8% of the variability in personal and social development explained by the regression.

Career Preparation as the Criterion

The 19 predictor variables were submitted to standard multiple regression to explain career preparation. After deleting cases with missing information on the criterion or any of the predictor variables, 247 cases were left for analysis. Evaluation of the assumptions for regression was unremarkable. Using Mahalanobis distance with $p < .001$, one multivariate outlier was identified and deleted from the data. In this analysis, R for regression was significantly different from zero, $F(19, 227) = 7.35$, $p < .001$. Five of the independent variables contributed significantly to the prediction of career preparation: activities with clubs and organizations ($sr^2 = .029$), quality of effort in vocational skills ($sr^2 = .026$), satisfaction with the campus environment ($sr^2 = .021$), skills instruction ($sr^2 = .019$), and quality of faculty contacts ($sr^2 = .012$). All 19 independent variables jointly contributed another .28 in shared variability. A total of 38% of the variability in career preparation was predicted by knowing the scores on the 19 independent variables.

Discussion

As expected from the research of numerous authors (Astin, 1971, 1975; Ethington & Smart, 1986; Johnson, 1994; Stoecker, Pascarella, & Wolfle, 1988; Thompson, 1976), students' assessments of their grades in previous courses were important in predicting GPA for the Black JOBSWORK participants as well. Surprisingly, the same was not true for the White students in this population. Perhaps constructs not tapped by the choice of variables included in this analysis explain GPA for the White subpopulation of JOBSWORK participants.

The role of student involvement as measured by Quality of Effort scales of the CCSEQ was evident in prediction of the affective outcomes analyzed. For predicting students' assessments of their gains in career preparation, involvement in clubs and organizations and quality of effort in both learning vocational or occupational skills and interacting with faculty members were significant. With personal and social development as the criterion, involvement in course experiences and club activities added significantly to the prediction. These results support the notion originally posited by Lehman (1991) that community college students who take advantage of the facilities and opportunities offered by their schools benefit more than the students who aren't involved.

Implications for Institutional Researchers

Satisfaction with the campus environment significantly affected both personal and career development in the multiple regressions. The CCSEQ Satisfaction Scale requested students to

estimate the following: how many fellow students are "friendly and supportive of one another;" how many instructors are "approachable, helpful, and supportive;" how many courses were "challenging, stimulating, and worthwhile;" how many support staff are "helpful, considerate, knowledgeable;" and how often students considered the college a "stimulating and exciting place to be." While other researchers (Baird, 1969; Copland-Wood, 1985; Pascarella, 1984, 1985; Pike, 1990) have employed a variety of predictors to explain satisfaction with the college experience as an outcome measure, the results of these analyses suggest that satisfaction as measured by the CCSEQ Satisfaction Scale is worthy of consideration as a predictor of other outcomes.

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Table 1

Descriptions for Predictor Variables in the Three Analyses

Name	Description	Code	
AGE	Age of respondent	1 = 19 or less to 6 = over 55	
ETHNICITY	Ethnicity	1 = African-American, 2 = White	
TIMESCH	Hours/week studying	1 = less than 5 to 5 = over 20	
TIMEWORK	Hours/week working	1 = none to 6 = over 40	
FAMILY	Family duties	1 = none to 4 = lots of time	
UNITSNOW	Units this term	1 = less than 6 to 5 = over 15	
GRADES	Previous grades	1 = no grades to 7 = A	
		Items	Range
QECOURSE	Course Activities	10	10 - 40
QELIB	Library Activities	7	7 - 28
QEFAC	Faculty Experiences	8	8 - 32
QEWRITE	Writing Activities	8	8 - 32
QESTACQ	Student Acquaintances	6	6 - 24
QECOUNS	Counseling/Career	7	7 - 28
QEVOC	Vocational Skills	7	7 - 28
QEAMT	Art, Music, Theater	6	6 - 24
QESCI	Science Activities	9	9 - 36
SKILLS	Learning/Study Skills	9	9 - 27
SATIS	Satisfaction Scale	5	5 - 20
CLUBS	Clubs and Organizations	3	3 - 12

Table 2

Standard Regression for GPA (African-American Students, N = 84)

	GPA for African-American Students	
Variable	r	β
CLUBS	.04	-.01
TIMEWORK	.03	.12
AGE	.14	.04
SATIS	.15	.01
GRADES	.47	.39**
SKILLS	.04	-.13
QESCI	.10	.04
FAMILY	-.18	-.07
TIMESCH	.06	-.09
UNITSNOW	.07	.01
QESTACQ	.28	.28
QEVOC	.37	.20
QECOUNS	.11	-.01
QEAMT	.06	-.13
QEFAC	.17	.04
QELIB	.02	-.16
QEWRITE	.12	.08
QECOURSE	.19	.01

r: correlation with DV; * $p < .05$, ** $p < .01$, *** $p < .001$

$R^2 = .35$

Table 3

Regressions for Career Preparation and Personal Development

Variable	Career Preparation r	Career Preparation β	Personal Development r	Personal Development β
CLUBS	.35	.20**	.36	.19**
TIMEWORK	-.04	-.02	-.03	<-.01
AGE	.10	.02	.09	.07
SATIS	.26	.16**	.30	.18**
GRADES	.22	.09	.13	.01
SKILLS	.25	.16**	.40	.24***
QESCI	.30	.10	.23	.09
FAMILY	.05	.03	-.01	-.02
TIMESCH	.17	.06	.13	.01
UNITSNOW	.14	.04	.15	-.01
QESTACQ	.33	.08	.37	.07
QEVOC	.36	.18**	.14	-.09
QECOUNS	.30	.10	.29	-.01
QEAMT	.23	-.08	.30	.01
ETHNICITY	.04	-.02	.00	.02
QEFAC	.40	.16*	.42	.02
QELIB	.26	.06	.36	.08
QEWRITE	.25	-.12	.40	.02
QECOURSE	.42	.02	.55	.25**
N	247		244	

r: correlation with DV; * $p < .05$, ** $p < .01$, *** $p < .001$
R^2 Career Preparation = .38; R^2 Personal Development = .45